

TRANSCRIPT – SOUND BITES: Symposium on BRAIN Initiative at Mayo Oct. 9-10, 2015

TITLE: Kendall Lee, M.D., Ph.D.

Director, Neural Engineering Laboratory at Mayo Clinic

1) Video File Clip #2

“We’re very excited to be hosting this Symposium, because Mayo Clinic is involved in the BRAIN Initiative. In fact, we are awarded one of the UO1 grants to develop novel technologies. In our case, we are developing new technologies for brain sensing, particularly neurotransmitter sensing using diamond electrodes. So, it’s really exciting.” Trt :26

2) Video File Clip #2

“The BRAIN Initiative is to develop novel technologies to probe the function and the structure of the brain. This includes technologies such as optogenetics, or chemical sensor systems, or imaging systems. So, here at the Mayo Clinic we’re developing novel diamond technologies as a brain sensor so that we can probe neurotransmitters that get released in the brain during function.” Trt :26

3) Video File Clip #3

“Through these types of technologies here at Mayo Clinic, we are doing implantable devices to treat a whole variety of disorders. For example, in deep brain stimulation, we are now able to implant electrodes into areas of the brain that are able to help our patients with Parkinson’s disease, tremor, dystonia. And, now we’re moving into even treating psychiatric disorders; like Tourette’s and obsessive compulsive disorder, as well as depression. Trt :28 Now, in particular, we’re also excited to be using these types of implantable technologies for treating of chronic pain. These are patients that there is no option and really the pain appears to be generated within the brain. And so what we do is to implant various types of stimulators so that we can get rid of pain.” 1:09

TITLE: Kevin Bennet

Chair, Mayo Clinic Division of Engineering

4) Video File Clip #4

“And what we’re going to be able to do is showcase all the work that is being done in a variety of laboratories across the nation focused on the biology of the brain. From our specific interest, it would be deep brain stimulation and measurements of neurotransmitters during deep brain stimulation. And our goal is to work on areas including depression, Tourette’s and other psychiatric issues that people do have.” Trt :30

5) Video File Clip #5

“The BRAIN Initiative has been very important for researchers in this area, from a couple of perspectives, one, providing a new source of funding. And this research does tend to be rather

expensive, so providing funds specifically directed at understanding the function of the brain is very important. But, also this is an interesting concept that has been put forward through the NIH and other funding agencies, that it's really one of collaboration. Where, we at Mayo internally collaborate very naturally among the different laboratories and the division of engineering, the clinical practice, the research and the education. But, what this initiative does is bring more people together, people that have skills in understanding the cellular mechanisms, people that have the knowledge and the capability of imaging. So, we're bringing together many research groups to focus on the issue of the brain." Trt :59